

• GUIDING THE TIP

Transportation System Plan

To decide where to best invest future County funds, MCDOT has developed an integrated series of plans and studies including: the Transportation System Plan, transportation management systems, small area transportation studies, the Bicycle Transportation System Plan, and numerous corridor studies. These tools provide various levels of detailed guidance for implementing the MCDOT mission in specific geographic areas or under specific conditions.

The Transportation System Plan (TSP) was adopted by the Board of Supervisors in December of 1997. This is the transportation element of Maricopa County's Comprehensive Plan 2020. It states that the transportation network should support safe and efficient movement of goods and people, be environmentally compatible with surrounding conditions, and support economic development activities.

The TSP organizes all county roadways into three networks: primary, secondary and local. Primary roads under County jurisdiction generally fall on the arterial grid and receive the highest priority for funding, maintenance, and other activities. Secondary roads typically are arterial and collector roadways under County jurisdiction which are not included on the Primary Network. Secondary roads have a lower priority and MCDOT's participation on these roads is more limited. Local roads are the remaining roadways that provide access to residences and feed into the secondary system. On these roads, MCDOT will continue to maintain them at a high level, but generally will not participate in significant improvements.

	System Priorities		
	Primary	Secondary	Local
Land Development Area			
Urban Service Area	H	M	L
Rural Development Area	H	L	L
Established Community / Existing DMP's	H	L	L
General Plan Development Area	M	L	L
Incorporated	L	N	N
New Development Master Plan	M	DR	DR

(Priorities: H=High, M=medium, L=low, DR= Developers Responsibility)

Figure 4. MCDOT Investment Matrix

To guide the prioritization of projects considered for the Transportation Improvement Program (TIP), the TSP uses an investment matrix, shown in Figure 4, that is applied to each candidate project evaluated for the TIP. The investment matrix provides direction on investing County funds for roadway projects, but does not guarantee funding for any specific project in the three networks.



Transportation Management Systems

MCDOT uses four transportation management systems to help monitor and measure the performance of the County transportation system. The four systems include congestion, safety, roadway and bridge management. The results of these systems help to plan and program future improvement projects. All four systems meet the planning strategy recommendations of the Federal Transportation Efficiency Act for the 21st Century, or TEA-21.

Congestion Management System (CMS)

MCDOT developed the CMS to provide data on the locations of present and future traffic congestion. The CMS documents how well the County's transportation system is performing. It identifies currently congested roads and possible future congested routes. The data from the CMS is used to recommend which roadways to improve and intersections to upgrade in order to better handle traffic.

An important part of the CMS is measuring how much congestion has been reduced. This allows the County to compare how well the various congestion-reducing methods are performing and to adopt the most cost-effective solutions. The County then provides the performance measurement data to decision-makers to guide them in selecting strategies and future projects.

Safety Management System (SMS)

The SMS identifies where potential highway safety problems are occurring. Suggested improvements are considered and implemented where suitable and feasible. The County evaluates safety in all phases of highway planning, design, construction, maintenance and operations. Traffic engineering staff evaluates traffic accident information including the type, location, cost, and rate of crashes for all County roadway segments and intersections. The County uses this data for developing effective highway safety strategies and selecting future TIP projects.

Roadway Management System (RMS)

The County RMS system is designed to provide the data to make informed decisions concerning which roadways should be upgraded or reconstructed. The RMS consists of data collection and an inventory of existing pavement and overall roadway features including the number of lanes, pavement widths, and surface types. The RMS also includes a condition survey that measures ride quality, surface distress, rutting, and surface friction. This data is used to analyze and summarize pavement conditions and evaluate the overall functional efficiency of the roadway. The RMS is used to select and



recommend cost-effective pavement construction, rehabilitation, and maintenance programs. The MCDOT Construction and Operations Division uses the data for planning its annual pavement maintenance program. The MCDOT Planning Division also uses the RMS to evaluate current and future projects for the TIP.

Bridge Management System (BMS)

The MCDOT BMS provides the process to evaluate bridges and structures within our inventory. Using the BMS, MCDOT can detect and identify alternative projects, predict costs, perform short and long term budgeting and recommend bridge rehabilitation and replacement projects consistent with MCDOT's policy and budget limits.



MCDOT completed the new Power Road Bridge at the Queen Creek Wash in 2003.



Small Area Transportation Studies

As part of the comprehensive planning process, four regional transportation studies have been completed. Figure 5 shows a map of these study areas. These studies identify short, medium and long-range transportation needs. They also recommend transit, bicycle and other alternative mode needs. Each study will receive regular updates (approximately every four years). The Maricopa Association of Governments began development of three area plans of their own in FY 02, with completion expected in 2003. It is MCDOT's plan to follow up with updates on our area studies upon completion of the MAG studies.

Southwest Valley Transportation Study

The Board of Supervisors adopted this study in July 1997. The study boundaries include parts of Avondale, Buckeye, Goodyear, Litchfield Park, Tolleson, and the unincorporated areas of Maricopa County.

Williams Area Transportation Plan

The BOS adopted this plan covering the southeast corner of the County in March 1997. Study participants included Mesa, Queen Creek, Gilbert, Chandler, and Maricopa County. It was done in cooperation with Williams Gateway Airport staff.

Northeast Valley Area Transportation Study

This study was adopted by the BOS in November 1996 and updated in 2002. The study produced a transportation plan for unincorporated Maricopa County north of the Carefree Highway east of Lake Pleasant to the Tonto National Forest. It includes the Anthem and Tramonto Master Planned communities along with the New River and Desert Hills unincorporated communities.

Northwest Valley Area Transportation Study

This study was completed in the summer of 2000. It included participation from Surprise, Glendale, Phoenix, Peoria, Youngtown, El Mirage, Goodyear, Litchfield Park, Maricopa County, the Sun Cities, and Luke Air Force Base. It ranged from 67th Avenue on the east to Rooks Road alignment on the west and roughly, Camelback Road on the south to the County line on the north.



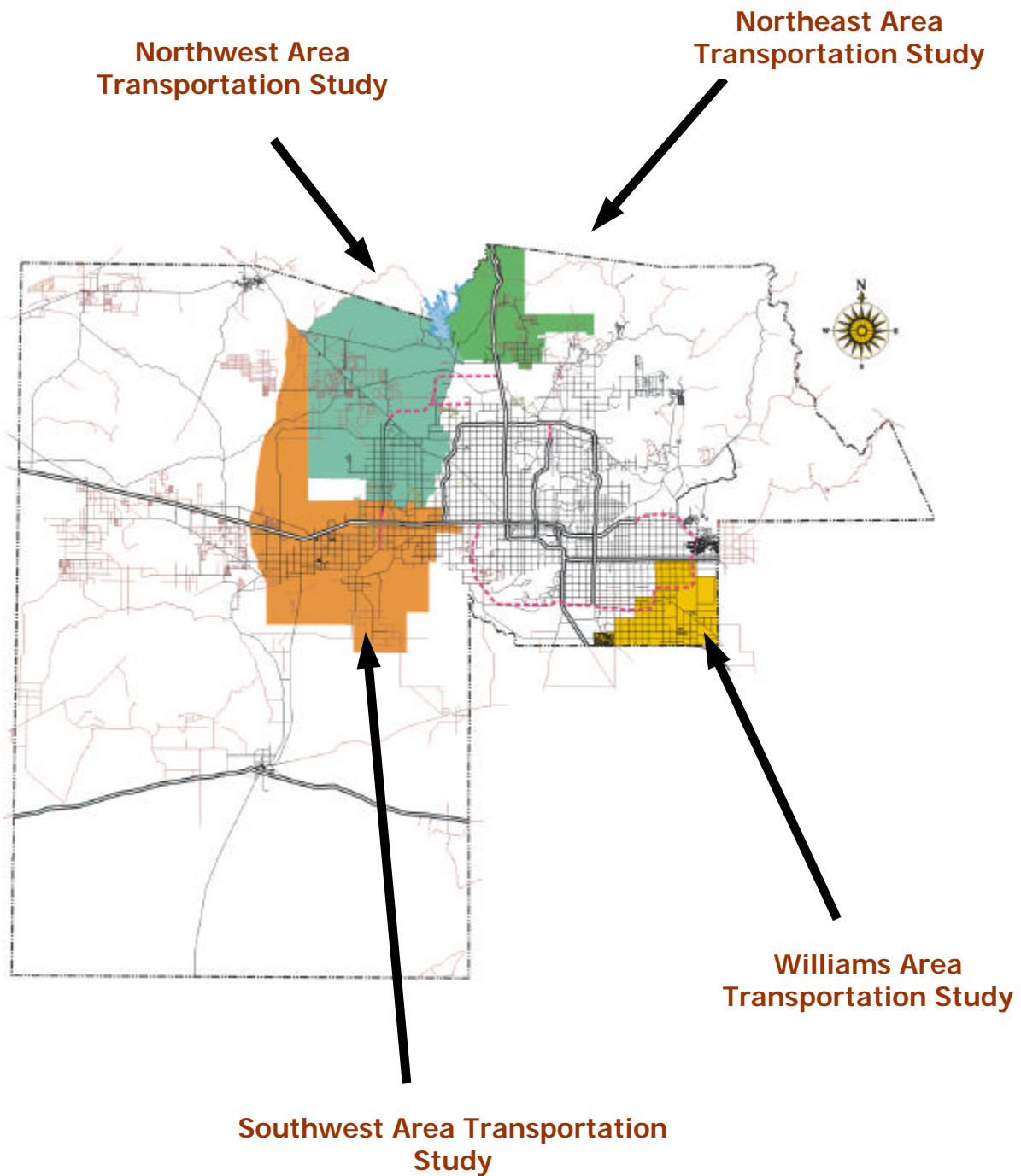


Figure 5. Small Area Transportation Studies Map



Corridor Studies

Corridor studies will be completed for all Primary System roads in unincorporated Maricopa County. The schedule for completion will vary depending on several factors and there may be more than one study for the entire length of a route. Completed corridor studies include:

1. 99th Avenue from I-10 to Glendale Avenue.
2. Carefree Highway from Lake Pleasant Road to Cave Creek Road.
3. Ellsworth Road from Hunt Highway (County Line) to Warner Road.
4. Loop 303 from MC 85 north and east to Lake Pleasant Road.
5. 115th Avenue from MC-85 to the Gila River
6. MC85 from SR85 to 75th Avenue.
7. Dysart Road from Northern Avenue to Greenway Road.
8. Riggs Road from I-10 east to Meridian Road.
9. I-17 Parallel Access.
10. Jackrabbit Trail/Tuthill Road from Germann Road to Indian School Road.
11. Lake Pleasant Road from Williams Road to Carefree Highway
12. Power Road from Riggs Road to Guadalupe Road.
13. Gilbert Road from Williams Field Road to Hunt Highway.
14. Queen Creek Road from Gilbert Road to Power Road.
15. Loop 303 Location Study.
16. Olive Avenue from Dysart Road to White Tanks Park Entrance.

Corridor and related studies that are ongoing or will begin in fiscal year 2004 include:

1. McDowell Road from Jackrabbit Trail to Sun Valley Parkway.
2. Loop 303 Southern Extension Location Study, MC-85 to Riggs Road.
3. Meridian Road from US-60 to Hunt Highway
4. Ocotillo Road from Power Road to Alma School Road
5. Feasibility Study for an East/West Reliever for Interstate 10 in the West Valley



Bicycle Transportation System Plan

The purpose of the Bicycle Transportation System Plan is to serve as an implementation element of the Transportation System Plan and Comprehensive Plan. It is intended to clearly define County bicycle policy and provide recommendations for the future. In addition to recommending bicycle transportation policies and identifying the benefit/cost of bicycle facilities, the Bicycle Plan identifies a County-wide bike network. An important element of the bike network is the planned integration of bike routes between the County and neighboring jurisdictions. The recommended bicycle network and Bicycle Improvement Program are intended as reference points and initial starting points. The ultimate bicycle network for Maricopa County includes all streets functioning as an arterial or lesser classification.

The Bicycle Transportation System Plan recommends the following policies:

General Bicycle Policy:

Maricopa County recognizes bicycling as a viable transportation mode, and actively works toward consistently and prudently improving the transportation network to increase access to the system for bicyclists. The plan establishes objectives for implementation.

Facility Commitment Policy:

MCDOT shall include bicycle facilities on all County roadways as described in the Roadway Design Manual and the Pavement Marking Manual. Bicycle projects not directly combined with a larger roadway project shall be evaluated separately during the Transportation Improvement Program process.

Organizational Change Policies:

MCDOT shall institute a multi-modal review process during project planning and design as well as during review of subdivision and development proposals to ensure proper inclusion of bicycle, pedestrian and transit needs. Partners, contractors and customers of MCDOT are to be informed of the position of the County towards bicycle transportation and encouraged to follow the same standards and principles when working in the County.



Thumbs up to MCDOT for our efforts to make the Bicycle Transportation Plan work.



Environmental Planning

All MCDOT planning projects and Transportation Improvement Program (TIP) projects will be evaluated for social, economic, and environmental impacts that may result from the construction and operation of a potential capital improvement project. MCDOT projects occurring on or adjacent to federally owned land, as well as projects that will be constructed using federal funds or grant monies, shall follow the formal National Environmental Policy Act (NEPA) process in accordance with Federal Highway Administration (FHWA) and the Arizona Department of Transportation (ADOT) guidelines. Environmental overviews are completed along with corridor studies and candidate assessment reports. Environmental clearances are conducted concurrently with design concept reports (DCRs).

Environmental review and documentation is an integral part of the transportation planning process and the engineering design phase. Transportation corridor studies and candidate assessment reports (CARS) include environmental overviews to identify environmental issues and concerns prior to projects being placed in the Transportation Improvement Program (TIP). Early in the design process, programmed projects are analyzed for environmental effects in accordance with local, state and federal regulations. Environmental impacts are identified, evaluated, and mitigated accordingly.

Environmental clearances will incorporate federal and state laws, statutes, and regulations, as appropriate. The environmental analysis process will focus on the avoidance, minimization, and mitigation of adverse effects on the natural and human environment.



McDowell Mountain Park works to preserve our desert environment.



Cultural Resources Management and Historical Preservation

Prior to project construction, MCDOT conducts historic preservation activities for each TIP project. Depending upon the nature and location of the proposed project, our professional evaluations may include the following types of activities:

- Site file archival research.
- Archaeological survey and site documentation.
- Traditional cultural property evaluations.
- Historic building surveys.
- Historic engineering records reviews.
- Site avoidance planning.
- Archaeological test excavations to determine site significance.
- Site mitigation excavations.
- Repatriation of human remains and sacred objects.
- Anthropological and ethnographic studies.

All aspects of our cultural resources management activities are conducted in keeping with the provisions of the Arizona Antiquities Act and the State Historic Preservation Act, as well as in keeping with federal laws, regulations and policies.

Consultation with Native American tribes and outreach with the public are important activities of the historic preservation planning process. Our standards for the confidentiality of records and consultation activities are in keeping with the current standards of anthropological and archaeological practice, and state and federal law.



MCDOT contracted archeologists work on a site adjacent to MC85.

